

patent"); and claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the '668 patent or the '166 patent in view of Kamikubo, U.S. Patent No. 5,861,978 (hereinafter "the '978 patent").

In response to the rejections of claims 1-15 under 35 U.S.C. 112, first paragraph, based on inadequate written description, Applicants respectfully traverse the rejection. The Office Action has again asserted that "The original disclosure requires the multi-beam optical scanner to have a coupling lens, a first image-formation system, and a second image-formation system in order to satisfy the condition."¹ The language necessary to rise to the level of "requires" has recently been discussed, and the specification of the present invention clearly does not rise to that level.

The Federal Circuit has recently reviewed when the specification can be construed as limiting claims to a particular embodiment. In the most recent case, SciMed Life Systems, Inc., v. Advanced Cardiovascular Systems, Inc., Slip Opinion, Appeal No. 99-1499 (Fed. Cir. March 14, 2001), the court focused on the Patentee's unequivocal statements as the basis for its decision to limit the claims. In its decision the Federal Court noted that the Patentee limited itself when it stated:

The intermediate sleeve structure defined above is the basic sleeve structure for all embodiments of the present invention contemplated and disclosed herein - namely, an inner core tube bonded to a distal portion of the main catheter shaft, with an outer sleeve forming an annular continuation of the inflation lumen through the main shaft between the core tube and outer sleeve.²

¹Office Action, paragraph crossing pages 3 and 4 (emphasis added).

² Slip opinion (quoting text from the patents in suit) (emphasis by the court).

In a similar case, The Gentry Gallery Inc. v. The Berkline Corp., 45 USPQ2d 1498 (Fed. Cir. 1998), it was again the Patentee's own words that were the cause for the narrowing. The court stated:

As the disclosure states, identifying the only purpose relevant to the console, "[a]nother object of the present invention is to provide . . . a console positioned between [the reclining seats] that accommodates the controls for both of the reclining seats." Thus, locating the controls anywhere but on the console is outside the stated purpose of the invention.³

The Office Action has not pointed to any express statements in the specification that are commensurate with the facts of the cited cases. Absent that, the Court's general warning — "It is a truism that a claim need not be limited to a preferred embodiment."⁴ — should be heeded and the claims should be indicated as supported and allowable.

Turning now to applying the above standard to the facts of the present case, the Office Action has not yet made a *prima facie* case that Applicants have unequivocally limited their disclosure and claims. The Office Action cites two previously cited sections of the specification and one new section in support of that assertion. The first section is col. 3, lines 13-15. The sentence including those lines states:

A lateral magnification β in a direction corresponding to the auxiliary scanning in a composite system of the optical system between the light source for a multi-beam and the scanned surface satisfies the following expression:

$$2 < \beta \leq 8.5 \quad \dots (1)$$

and a plurality of light spots optically scan scanning lines adjacent to each other.

³Id. at 1503.

⁴Id. at 1503.

Clearly that section says nothing about needing any particular type of lens or image-formation system. If the intention of the Office Action was to suggest that "composite system" is somehow limiting, it is noted that the section states "a composite system" not "the only composite system contemplated under the invention" or other such limiting words.

The second cited section discusses a particular implementation and states:

A lateral magnification β in the direction corresponding to the auxiliary scanning in the composite system (the coupling lens 15, cylinder lens 25, constant-velocity optical-scanning image-forming mirror 41, lengthy toroidal lens 45) of the optical system between the light source 10 for a multi-beam and the scanned surface is a ratio D_{20}/D_{10} between a space D_{10} of two adjacent light emitting sections in the light source 10.

While the cited section references an exemplary embodiment of a composite system in a particular figure, it does not say that the invention as a whole is so limited.

The newly cited third section states:

The image-forming magnification of the optical system in the side of the light source is decided by means of a magnification of the coupling lens and an image-forming magnification of the first image-formation system, however, a light flux coupled by the coupling lens is weak in converging performance or in diverging performance even in both cases where the light flux becomes a light flux to be converged and where it becomes a light flux to be diverged, so that a value of an image-forming magnification of the optical system in the side of the light source becomes substantially close to a ratio between a focal length of a coupling lens and that of the first image-formation system.

This, however, is just one method of performing the general process described in the paragraph preceding it which states:

In the present invention, a diameter of a light spot or a pitch between scanning lines on the scanned surface are decided mainly by means of an image forming magnification in "an optical system in the side of the light source side" and an image-forming magnification in the second image-formation

system according to a coupling lens and the first image formation system.

Importantly, the entire specification should be read in light of the fourth full paragraph of column 12 that expressly states that the specification is not to be interpreted as limiting the scope of the invention.

Accordingly, Applicants have not unequivocally limited their specification and claims to any particular lens-based configuration. In fact generally, as discussed in the previously filed response, and not rebutted by the Office Action, it is believed that Applicants may meet the adequate written description requirement without reciting all of the elements disclosed in their specification. In Reiffin v. Microsoft Corp., 54 USPQ2d 1915 (Fed. Cir. 2000), Judge Newman of the Federal Circuit stated in her concurring opinion that:

It is standard for applicants to provide claims that vary in scope and in content, including some elements of a novel device or method, and omitting others.

See Irving Kayton, 1 Patent Practice (6th ed.) 3.1, 3.3 (1995)....

Moreover, Judge Newman further cited 3 Lipscomb's Walker on Patents 290-91 (1985) which states that:

[A] claim may cover an invention embracing the entire process, machine, manufacture, or composition of matter which is described in the specification, or it may cover such sub-processes or such sub-combinations of the invention as are new, useful and patentable. See, e.g., Special Equipment Co. v. Coe, 324 U.S. 370 (1945) (reversing the rejection of a sub-combination claim directed to the previously claimed invention less one element). While the specification must of course describe the claimed invention, it is well established that the claims need not include every component that is described in the specification. See Aro Mfg. Co. v. Convertible Top Replacement Co., 365 U.S. 336, 345, 128 USPQ 354 (1961) (There is "no legally recognizable or protected 'essential' element . . . in a combination patent.").

Accordingly, it is respectfully submitted that numerous figures in Applicants' specification illustrate that Applicants were in possession of the claimed invention at the time

of filing. The Federal Circuit has held that "If ... the specification contains a description of the claimed invention, albeit not *in ipsis verbis* (in the identical words), then the examiner..., in order to meet the burden of proof, must provide reasons why one of ordinary skill in the art would not consider the description sufficient."⁵ Applicants formally request that those reasons be articulated in a next Office Action or that the ground for rejection be withdrawn.

In response to the rejection of the claims as failing to be supported by an enabling disclosure, Applicants respectfully traverse the rejection. Rather than proffer evidence as to why one of ordinary skill in the art would be unable to make and use the invention, especially in light of a declaration from an expert stating that it was possible, the Office Action merely posits the question of how it would be done. One answer is to use a light source that is strong enough that it does not require a collimating lens. One such lens is referenced in the Supplemental Declaration of Mr. Seizo Suzuki, in paragraph 6, which states:

6. One of ordinary skill in the art would have known to find a description of a suitable light source to make and use the invention as evidenced by Figure 7 in Japanese Patent Laid-Open Publication No. 2-61608.

As a second attack, the Office Action cites In re Mayhew, 527 F2d 1229, 188 USPQ 356 (CCPA 1976) when it states that the coupling lens/collimating lens is necessary for enablement. The reliance on Mayhew is misplaced. The decision in Mayhew was based on the fact that it was not physically possible to produce the product without the claimed cooling step being performed at a particular location. The court stated:

Without a cooling zone at the exit side, the unusually high bath temperature would cause alloying to continue when the strip

⁵*In re Alton*, 37 USPQ2d 1578, 1583 (Fed. Cir. 1996) (quoting *In re Wertheim, et al.*, 191 USPQ 90 (CCPA 1976)).

leaves the bath (due to its high temperature) and result, for various reasons, in an inferior alloy coating. Appellant's specification states that the "strip *** and bath *** are raised in temperature above what is ordinarily considered optimum coating temperatures. This is practicable because of special cooling apparatus, specially located."⁶

The present invention is not constrained by such a physical impossibility as evidenced by the previously filed Supplemental Declaration of Mr. Seizo Suzuki. Accordingly, the reliance on Mayhew, as well as the ground for rejection relying thereon, should be withdrawn.

In response to the rejection of Claims 1-6 and 10-15 under 35 U.S.C. § 102(a) as being anticipated by the '668 patent, that ground for rejection is respectfully traversed. The Office Action asserts that the multi-beam scanner of the '668 patent has a lateral magnification of 127/5.5 or 5.08. To achieve this result, the Office Action impermissibly takes a statement from one context (i.e., the Abstract) and seeks to apply it to a discussion in a completely different context (i.e., in the discussion of column 5). The Abstract discloses "a line separation of 127 μm ," and column 5, lines 45-55, discloses that adjacent scan lines are separated by that distance in an interlaced mode. However, as is clear from Table 1 (column 5, lines 35-55), the image configuration utilizes scan line interface factor of 3. Thus, the light spots on adjacent lines are not separated by 127 μm , but are rather separated by 127 $\mu\text{m}/3$ or 42.3 μm , as shown in Appendix A. Accordingly, the actual lateral magnification is 42.3/25 or 1.7, which falls outside the recited range of 2< β <8.5.

The Office Action has emphasized that column 5, lines 54-55, discloses that "the scan lines can form consecutive, or in-pitch, scan lines." If the change were made from interlaced to in-pitch, the consecutive lines would still be 42.3 μm apart, as shown in Appendix B.

⁶Id. at 358

Thus, such scan lines would also correspond to a magnification of $42.3 \mu\text{m}/25 = 1.7$. This too is outside of the claimed magnification range.

Accordingly, according to the system of the '668 patent, neither adjacent nor interlaced scanned lines provide the magnification recited in the claims. Thus, that ground for rejection should be withdrawn.

In response to the rejection of Claims 1-6 and 10-15 under 35 U.S.C. § 102(a) as being anticipated by the '166 patent, that ground for rejection is respectfully traversed. The independent claims recite "the plurality of light spots on the scanned surface optically scan scanning lines adjacent to each other on plural consecutive scans." The Office Action has asserted that the '166 patent "does not limit [its] invention to only us[ing] light beams emitted from the multiple beam light source for forming interlaced scan lines on the photoreceptor 64." Thus, the Office Action asserts that the cited limitation "is inherently disclosed." Such an allegation is unsupportable, especially in light of a disclosure of the opposite. As shown in Appendix C, "inherent" means "existing in someone or something as a permanent and inseparable element, quality or attribute; innate." Clearly not all copiers are non-interlaced,⁷ thus the type of copier is not an "inseparable quality" of the copier. Since interlaced images are the opposite of non-interlaced images, the '166 patent can describe one technique without "inherently" disclosing the other. Moreover the silence in a single claim is not indicative of what is inherently taught in the patent.

In addition, the independent claims of the present application are directed to a less complicated system than that of the '166 patent. As discussed in the response to the first

⁷The Office Action's silence on the issue of disclosing an interlaced image is taken as an admission that interlaced images are taught.

Office Action, an interlaced optical scanner requires a more irregular signal for modulating each light beam. In addition, images can be more easily degraded using the interlaced technique. This occurs because consecutive scanning lines have a relatively larger space therebetween (see Appendix A), resulting in an increasing bend of scanning lines which increases a rate of pitch deviation. Accordingly, the present invention provides a less complicated design (with a potentially less degraded image) than the interlaced configuration of the '166 patent and is patentably distinguishing therefrom.

In response to the rejection of claim 7, claim 7 depends from independent claim 1 and is therefore patentable for at least the reasons set forth for the patentability of claim 1.

Consequently, the pending claims are believed to be patentably distinguishing over the prior art and in condition for allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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